U.S. Department
of Transportation
**National Highway
Traffic Safety
Administration**

NHTSA

DOT HS 812 534 June 2018

Special Crash Investigations Non-Traffic Surveillance Remote Hyperthermia Fatality Investigation Vehicle: 2003 Mitsubishi Galant Location: South Carolina Incident Date: July 2014

DISCLAIMER

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Because each crash is a unique sequence of events, generalized conclusions cannot be made concerning the crashworthiness performance of the involved vehicle(s) or their safety systems.

This report and associated case data are based on information available to the Special Crash Investigation team on the date this report was published.

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16. *Abstract* The interest in this remote investigation involve the circumstances surrounding the hyperthermia-related fatality of a 3-year-old male who was found inside a 2003 Mitsubishi Galant that was parked on the lawn area of his home. The child exited the house while his parents were asleep during the midday hours. The child and a family dog entered the parked Mitsubishi. The police reported that the driver's door of the Mitsubishi would not stay open at its detent and would swing closed and latch. The child was found unconscious inside the parked vehicle by his mother approximately one hour after he exited the residence. The family called the emergency response system and immediately placed the child in cold water in the bathtub in an attempt to lower his body temperature. The responding Emergency Medical Service (EMS) requested helicopter transport to a regional pediatric trauma center where he expired due to complications of hyperthermia approximately 3.5 days after the incident.			
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SPECIAL CRASH INVESTIGATIONS
CASE NO. CR16036
REMOTE HYPERTHERMIA FATALITY INVESTIGATION
VEHICLE: 2003 MITSUBISHI GALANT
LOCATION: SOUTH CAROLINA
INCIDENT DATE: JULY 2014

BACKGROUND

The interest in this remote investigation involve the circumstances surrounding the hyperthermia-related fatality of a 3-year-old male who was found inside a 2003 Mitsubishi Galant (**Figure 1**) that was parked on the lawn area of his home. The child exited the house while his parents were asleep during the midday hours. The child and a family dog entered the parked Mitsubishi. The police reported that the driver's door of the Mitsubishi would not stay open at its detent and would swing closed and latch. The child was found unconscious inside the parked vehicle by his mother approximately one hour after he exited the residence. The family called the emergency response system and immediately placed the child in cold water in the bathtub in an attempt to lower his body temperature. The responding Emergency Medical Service (EMS) requested helicopter transport to a regional pediatric trauma center where he expired due to complications of hyperthermia approximately 3.5 days after the incident. The dog was found deceased inside the vehicle.

Figure 1: Image of the 2003 Mitsubishi Galant on the lawn area of the incident. (Image obtained from the investigating police department.)

The incident was identified by the National Highway Traffic Safety Administration and assigned to the Special Crash Investigations (SCI) group for further research in November 2016. This research was aimed to chronicle the circumstances of these types of incidents and provide direction to potential countermeasures. Approximately 700 children have died due to hyperthermia over a 19-year period (1998 to 2016) with 28 percent of these deaths attributed to children playing in unattended vehicles.[1]

The SCI team contacted the involved police agency and interviewed the investigating officer to obtain the circumstances of the incident. This interview, images of the Mitsubishi supplied by

[1] Null, J. (2016). Heatstroke Deaths of Children in Vehicles (Web page). San Jose, CA: Department of Meteorology and Climate Science, San Jose State University (2016), Retrieved from http://noheatstroke.org

the police, an exemplar vehicle inspection, supplemental internet research and medical data provide the basis for this remote SCI investigation.

INCIDENT SITE

This hyperthermia incident occurred on the lawn area of a private residence in a rural area during midday hours. The family residence was a mobile home that was oriented in a north/south direction on a large lawn area **(Figure 2)**. The family vehicle, consisting of the Mitsubishi that was registered to the child's grandmother was parked on the lawn, east of the mobile home facing in a southwesterly direction. On the day of the incident the National Weather Service reported a temperature of 30 ºC (86.0 ºF) at 1155 hours, approximately the time the child entered the Mitsubishi. At the recorded time, the heat index was 35 ºC (95.1 ºF) with 70 percent humidity and the wind was out of the north-northwest at 5.6 km/h (3.5 mph). The temperature increased to 32 ºC (89.6 ºF) at 1255 hours, the approximately time the child was found unconscious in the vehicle. At this recorded time, the heat index was 37.6 ºC (99.8 ºF) with 62 percent humidity with east-northeast winds reported at 9.3 km/h (5.8 mph). The sky was classified as party to mostly cloudy.

Figure 2: Satellite image of the Incident Site. North lies at the top of the image.

2003 MITSUBISHI GALANT

Description

The involved vehicle was a 2003 Mitsubishi Galant GTZ 4-door sedan. The Vehicle Identification Number (VIN) was not recorded in the Police Incident Report. Based on the available police images, the Mitsubishi was black in exterior color. The vehicle was configured with a sunroof, a V-6 gasoline engine, 4-wheel disc brakes and 6-spoke alloy wheels. The transmission was a 4-speed automatic with a console-mounted shifter. **Figure 3** is an exterior view of the Mitsubishi Galant.

Figure 3: Front right exterior view of the 2003 Mitsubishi Galant. (Image obtained from the investigating police department.)

The interior of the Mitsubishi consisted of front row bucket seats with adjustable head restraints and a three-passenger second row bench seat. The front seat backs were in the upright and usable position to an occupant at the time of the incident. All seating surfaces were leather. The entire interior was gray in color. **Figure 4** is a left interior view of the Mitsubishi's front row.

Figure 4: Front row interior of the 2003 Mitsubishi Galant. (Image provided by the investigating police department.)

Glazing

The Mitsubishi was configured with an AS1 laminated windshield, operable AS2 glazing at each door, fixed rear door quarter windows, an AS2 fixed backlight and an operable sunroof with AS3 glazing. The child's grandfather said the vehicle was equipped with aftermarket window tint. This aftermarket tint was visible on the second row doors. He further stated that some of the tint had to be removed as it was scratched by the dog during the incident. It is unknown if the aftermarket window tint was applied to both front doors and the backlight. The roof window was closed at the time of the incident; the position of the interior cover was unknown.

Exterior Door Handles

The four exterior door handles on the Mitsubishi were hinged at the top edge and rotated in an upward direction to release the door latch **(Figure 5)**. The bottom edge of the driver's door latch was measured by the investigating officer at 78 cm (30.75 in) above the ground. The SCI team documented an exemplar Mitsubishi Galant and recorded the same measurement for the front handles. Fully rotated (lifted), the front door latches measured 81 cm (31.75 in) above the ground. The rear door handles on the exemplar vehicle measured 82 cm (32.25 in) and 85 cm (33.5 in) respectively. Keyed lock cylinders were incorporated into both front door handle assemblies.

Figure 5: Exterior driver's door handle of the Mitsubishi. (Image provided by the investigating police department.)

Interior Door Release Levers

The interior door release levers on the Mitsubishi were located in the upper-forward aspect of the door panels and consisted of an L-shaped lever requiring a horizontal pull to open the doors. The levers were 10 cm (3.75 in) in length, inclusive of the hinge point. The levers were flush-mounted to the door panel. **Figures 6 and 7** are exemplar views of the interior door release levers.

Figure 6: View of the exemplar driver's door interior release lever.

Figure 7: View of the exemplar second row left door interior release lever.

Door Locking System

A power locking system was standard equipment on the Mitsubishi. Remote locking and unlocking was accomplished by the battery-operated key fob. Based on the exemplar vehicle inspection, the fob was configured with two buttons; one to lock all four doors with a single engagement of the button, and one unlock button that unlocked the driver's door on a single engagement and the remaining three doors with two engagements of the button.

The interior-mounted power locking system consisted of rocker-type switches that were mounted on the up-sloped forward edge of the integrated armrest on both front door panels. The leading edge (forward) of the switch provided the locking function while the aft edge was the unlock mode. The rear doors were not equipped with power lock switches. **Figures 8 and 9** are exemplar views of the front row power locking rocker switches.

Figure 8: View of the exemplar driver's power locking switch.

Figure 9: View of the exemplar front row right power locking rocker switch.

The interior manual locking system consisted of rotating lock knob located directly above the interior door release lever **(Figure 10)** at each door. The color coordinated lock knobs matched the release levers. The leading edges of the knobs were marked with a high visibility orange stripe, visible only in the unlocked position. With the rotating knob pushed forward and flush with the release lever, the door would lock. Rotating the knob rearward unlocked the doors.

Figure 10: Exemplar interior manual locking knob in unlocked position.

With the doors locked either by key fob, utilizing the interior power locking switches, or manually locking all four doors independently, the front door release levers would override the lock for the specific door. The rear door locks would not unlock when the release lever was pulled. The rotating locking knob had to be manually rotated rearward to unlock the specific second row door.

Door Detent

The investigating officer reported that the driver's door of the Mitsubishi would not stay open at the time of the incident. Apparently the detent was worn allowing the door to self-close due to a shallow grade of the lawn area. The SCI inspection of the exemplar vehicle determined the doors were equipped with two detent positions located approximately at one-third and two-thirds of the door's travel.

INCIDENT

Prior to the incident, the 3-year-old child was inside the family's mobile home watching television with his 24-year-old mother. They were seated on the couch. The child's father was asleep in a separate room, as he had returned to the residence in the early morning, daylight hours from his work shift. The child's grandmother was in her room watching television. The child was police-reported as walking about the mobile home, from the living area to his grandmother's room on several occasions. The child's mother stated to the investigating police officer that she fell asleep on the couch with the child at her side at approximately 1200 hours. She referenced this time to a program that was airing on the television.

The child's mother awoke at approximately 1300 hours and noticed her son missing from the couch. She got up and started to look for him and began screaming his name in an attempt to locate the child. The mother looked outside and observed the emergency flashers activated on the grandmother's 2003 Mitsubishi. She ran to the vehicle and observed the child slumped over on the driver's seat. The mother opened the driver's door, removed the child from the vehicle and

carried him into the mobile home. The child was lethargic and mumbled to his mother as she splashed cold water on his face. The mother instructed the grandmother to call the emergency response system. The first call to the emergency response system was dropped due to a poor cellular connection. The second call was made and police and emergency medical services were dispatched at 1316 hours. EMS personnel arrived prior to the police. The time of the police arrival was reported at 1324 hours. The child was transported by helicopter to a regional pediatric trauma center and was admitted in critical condition. He expired 3.5 days following the incident. During the hospitalization, the child victim's kidneys failed and he developed internal pulmonary bleeding, consequences of the hyperthermia.

A reconstruction of the sequence of events was derived from the documentation of the investigating officer based on his interviews with the involved parties, his inspection of the mobile home, and the inspection and documentation of the Mitsubishi.

The mobile home was configured with a single exterior door. A storm door was mounted to the exterior frame of the entrance door. The officer described the door latches as follows: The storm door was operable and the latching mechanism was intact; however, there was a screw missing from the bottom of the latch. The mobile home door had a knob-operated locking system. To lock the door from the inside, the door knob had to be pushed forward to engage the lock. Turning the knob from the inside would release the lock feature. The child's grandfather installed a hasp-type lock on the inside of the door and used a carabiner to prevent the child from unlatching the hasp. At the time of the police inspection, there was no carabiner present.

The door to the mobile home opened onto a small wooden deck. A flight of five steps transitioned the deck to ground level. The Mitsubishi was parked on the lawn area in the vicinity of the deck. While the mother was sleeping, the child opened the doors of the mobile home and exited the residence onto the deck. From there he walked down the steps to the Mitsubishi. A family dog accompanied him to the vehicle. It is unknown if the dog was in the mobile home or was outside when the child emerged.

The child apparently opened the driver's door of the Mitsubishi and both he and the dog entered the vehicle. The police officer inspected the vehicle and documented the status of the driver's door. He reported the door would not stay open at the manufactured detent positions. Due to the slight slope of the lawn area, the door would close on its own. It was then theorized that as the child and dog entered the vehicle, the door closed behind them. The grandfather of the child stated in a follow-up interview that the child knew how to work the doors of the vehicle as he would play in it from time to time.

As the child and dog became entrapped within the Mitsubishi, one of them activated the hazard warning flashers. The hazard warning switch was located on the upper-mid instrument panel and

consisted of a hard push-type switch. To activate the flashers, the switch had to be depressed and the switch face would return to its original position. Depressing the switch again, once the flashers were activated, would turn off the flashers and return the switch to its neutral (off) position.

The family reported that post-event, they entered the Mitsubishi to drive to the hospital. It was at that time that they found the dog was deceased in the back seat area of the vehicle. The family also reported they had to clean the inside of the vehicle and removed some of the aftermarket window tint as the dog had scratched the tint film in an attempt to get out of the vehicle.

The total duration from the time the child exited the mobile home to his discovery in the Mitsubishi was estimated by his mother to be approximately one hour.

The investigating officer and medical staff documented superficial scratches on the child victim's extremities and torso during his hospitalization. It was suspected that these resulted from the dog that was in the vehicle with the child victim.

NON-MOTORIST DEMOGRAPHICS

The child involved in this hyperthermia investigation was a 3-year-old male with a police-reported height of 99 cm (39 in) and a weight of 24 kg (54 lb). His clothing worn at the time of the incident was not reported. In addition to the child, three adults were living at this residence. Supervision at the incident time was directed by his 24-year-old mother; his 24-year-old father was asleep in a separate room and his 46-year-old grandmother was in another room watching television.

NON-MOTORIST INJURIES

Injury No.	Injury	AIS 2015	Involved Physical Component	IPC Confidence
1	Hyperthermia	010200.1	Vehicle entrapment	Certain
2	Superficial abrasions of the right arm	710202.1	Dog scratches	Probable
3	Superficial abrasions of the left arm	710202.1	Dog scratches	Probable
4	Superficial abrasions of the right leg	810202.1	Dog scratches	Probable
5	Superficial abrasions of the left leg	810202.1	Dog scratches	Probable
6	Superficial abrasions of the torso	410202.1	Dog scratches	Probable

Source – Police Incident Report

INCIDENT SITE DIAGRAM

Incident Site:
Private Property

V1: 2003 Mitsubishi Galant

	NHTSA www.nhtsa.gov
Case Number:	CR16036

APPENDIX A: Non-Traffic Surveillance Forms

Not Applicable ☐

Reset Values | Print Forms

U.S. Department of Transportation
National Highway Traffic Safety Administration

SCENE FORM

Special Crash Investigations
Non-Traffic Surveillance

1. Case Number

C R 1 6 0 3 6

IDENTIFICATION

2. Date of Crash 0 7 / x x / 1 4

3. Time of Crash 1 3 1 6

Code reported military time of crash.

NOTE: Midnight = 2400
Unknown = 9999

AMBIENT CONDITIONS

4. Light Conditions

- ◉ Daylight
- ☐ Dark
- ☐ Dark but lighted
- ☐ Dawn
- ☐ Dusk
- ☐ Unknown

5. Atmospheric Conditions
(*Select all that apply*)

- ☐ Clear-No adverse conditions
- ◉ Cloudy
- ☐ Rain
- ☐ Snow
- ☐ Fog, Smog, Smoke
- ☐ Sleet, Hail (freezing rain or drizzle)
- ☐ Blowing Snow
- ☐ Severe Crosswinds
- ☐ Blowing Sand, Soil, Dirt
- ☐ Other (specify): _____
- ☐ Unknown

6. Temperature

- ☐ Below 0 degrees Celsius (Below 32 F)
- ☐ 1-10 degrees Celsius (33-50 F)
- ☐ >10-24 degrees Celsius (51-75 F)
- ◉ Over 24 degrees Celsius (Over 75 F)
- ☐ Unknown

SCENE INFORMATION

7. Type of area in which crash occurred
(*Select all that apply*)

- ◉ Single family residential
- ☐ Row houses/townhouses
- ☐ Multi family housing
- ☐ Commercial
- ☐ Industrial
- ☐ Rural
- ☐ Unknown

8. Driver exterior sightline obstructions
(*Select all that apply*)

- ☐ None
- ☐ Other vehicles
- ☐ Building
- ☐ Trees
- ☐ Shrubbery
- ☐ Utility poles
- ☐ Signs
- ☐ Glare
- ☐ Unknown
- ☐ No driver present
- ◉ Other (specify) N/A

9. Crash location

- ☐ Driveway
- ☐ Parking Lot
- ☐ Sidewalk
- ☐ Alley
- ☐ Road / street
- ☐ Roadside / shoulder
- ◉ Other (specify) N/A
- ☐ Unknown
- ☐ Intersection of driveway and sidewalk

10. Non motorist sightline obstructions
(*Select all that apply*)

- ☐ None
- ☐ Other vehicles
- ☐ Building
- ☐ Trees
- ☐ Shrubbery
- ☐ Utility poles
- ☐ Signs
- ☐ Glare
- ◉ Other (specify) N/A
- ☐ Unknown

11. Grade at parked position +/- 9 9 9 %

12. Estimated distance from parked position to impact

0 0 0 . 0 m

13. Estimated speed at impact 0 0 0 kmph

14. Grade at impact +/- 9 9 9 %

15. Estimated distance from impact to vehicle final rest

0 0 0 . 0 m

Unknown = 999 Reference Items 11,12, 13, 14, 15

Revised January 2018

Not Applicable ☐

Reset Values

U.S. Department of Transportation
National Highway Traffic Safety Administration

VEHICLE FORM

Special Crash Investigations
Non-Traffic Surveillance

1. Case Number C R 1 6 0 3 6

VEHICLE IDENTIFICATION

2. VIN 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9

3. Model Year 2 0 0 3

4. Vehicle Make (specify): Mitsubishi

5. Vehicle Model (specify): Galant

GLAZING

Location	Presence (check)	Status (select)	Clarity (select)	Tint (check)	Glazing Obstructions (specify if present)
Windshield	☑	☑ Fixed / ☐ Closed / ☐ Open / ☐ Partially Open / ☐ Unknown	☐ Clear / ☐ Hazy / ☐ Very Dirty / ☑ Unknown	☐	Not inspected
LF	☑	☐ Fixed / ☑ Closed / ☐ Open / ☐ Partially Open / ☐ Unknown	☐ Clear / ☐ Hazy / ☐ Very Dirty / ☑ Unknown	☐	
RF	☑	☐ Fixed / ☑ Closed / ☐ Open / ☐ Partially Open / ☐ Unknown	☐ Clear / ☐ Hazy / ☐ Very Dirty / ☑ Unknown	☐	
2nd Left	☑	☐ Fixed / ☑ Closed / ☐ Open / ☐ Partially Open / ☐ Unknown	☐ Clear / ☐ Hazy / ☐ Very Dirty / ☑ Unknown	☑	
2nd Right	☑	☐ Fixed / ☑ Closed / ☐ Open / ☐ Partially Open / ☐ Unknown	☐ Clear / ☐ Hazy / ☐ Very Dirty / ☑ Unknown	☑	
3rd Left	☑	☑ Fixed / ☐ Closed / ☐ Open / ☐ Partially Open / ☐ Unknown	☐ Clear / ☐ Hazy / ☐ Very Dirty / ☑ Unknown	☐	
3rd Right	☑	☑ Fixed / ☐ Closed / ☐ Open / ☐ Partially Open / ☐ Unknown	☐ Clear / ☐ Hazy / ☐ Very Dirty / ☑ Unknown	☐	
Backlight	☑	☑ Fixed / ☐ Closed / ☐ Open / ☐ Partially Open / ☐ Unknown	☐ Clear / ☐ Hazy / ☐ Very Dirty / ☑ Unknown	☐	
Left Backlight	☐	☐ Fixed / ☐ Closed / ☐ Open / ☐ Partially Open / ☐ Unknown	☐ Clear / ☐ Hazy / ☐ Very Dirty / ☐ Unknown	☐	
Right Backlight	☐	☐ Fixed / ☐ Closed / ☐ Open / ☐ Partially Open / ☐ Unknown	☐ Clear / ☐ Hazy / ☐ Very Dirty / ☐ Unknown	☐	
Roof	☑	☐ Fixed / ☑ Closed / ☐ Open / ☐ Partially Open / ☐ Unknown	☐ Clear / ☐ Hazy / ☐ Very Dirty / ☐ Unknown	☐	
Other (specify)	☐	☐ Fixed / ☐ Closed / ☐ Open / ☐ Partially Open / ☐ Unknown	☐ Clear / ☐ Hazy / ☐ Very Dirty / ☐ Unknown	☐	

TIRE DATA

6. Vehicle Manufacturer Recommended Tire Size P205/55R15

7. LF Tire Size Unknown

8. LR Tire Size Unknown

9. RF Tire Size Unknown

10. RR Tire Size Unknown

Revised January 2018

Seats / Head Restraint Data

Seat Position	Seat Type (Select from below)	Head Restraint (Check if available)	Head Restraint Adjustment (select)	NOTES:
Front Left	1	☑	☑ Full Down / ☐ Mid / ☐ Full Up	Not inspected by SCI team.
Front Middle	0	☐	☐ Full Down / ☐ Mid / ☐ Full Up	
Front Right	1	☑	☑ Full Down / ☐ Mid / ☐ Full Up	
2nd Left	3	☑	☑ Full Down / ☐ Mid / ☐ Full Up	
2nd Middle	3	☐	☐ Full Down / ☐ Mid / ☐ Full Up	
2nd Right	3	☑	☑ Full Down / ☐ Mid / ☐ Full Up	
3rd Left		☐	☐ Full Down / ☐ Mid / ☐ Full Up	
3rd Middle		☐	☐ Full Down / ☐ Mid / ☐ Full Up	
3rd Right		☐	☐ Full Down / ☐ Mid / ☐ Full Up	

Seat Type codes:

0 = No seat or seat folded down
1 = Bucket
2 = Bucket w/ folding back
3 = Bench
4 = Bench with folding back cushions
5 = Bench w/ folding back
6 = Split bench w/ separate back cushions
7 = Split bench w/ separate folding back
8 = Pedestal (i.e. column supported)
9 = Box mounted (i.e. van type)
10= Other seat type (specify)
99= Unknown seat type

VEHICLE MEASUREMENTS

Clearance Heights		Measurements (all from ground, and in centimeters	NOTES
Beltline			Not inspected by SCI team.
Top of trunk/tailgate			
Bottom of bumper			
Trailer hitch (if applicable)			
Undercarriage			
	Sway bar		
	Axle		
	Differential		
	Other (specify): _____		
Sensor Height (if equipped)			
Camera Height (if equipped)			

Not Applicable ☑

Undo Not Applicable

Reset Values

U.S. Department of Transportation
National Highway Traffic Safety Administration

Back Up / Parking Aid Form

Special Crash Investigations
Non-Traffic Surveillance

1. Case Number

C R 1 6 0 3 6

PARKING AID PRESENCE

2. Type of backing/parking aid present

- ☐ OEM camera
- ☐ OEM ultrasonic/radar sensor
- ☐ OEM combination camera-ultrasonic/radar sensor
- ☐ OEM Fresnel lens
- ☐ OEM interior mirrors
- ☐ Aftermarket camera
- ☐ Aftermarket ultrasonic/radar sensor
- ☐ Aftermarket combination camera-ultrasonic radar sensor
- ☐ Aftermarket Fresnel lens
- ☐ Aftermarket interior mirrors
- ☐ Other (specify): _____

CAMERA INFORMATION

Specify field of view measurements on diagram

3. System make/model

_____

4. Video monitor type

- ☐ None present
- ☐ LCD (color)
- ☐ CRT (black & white)
- ☐ Unknown

5. Video display size _____ cm
(Diagonal)

6. Camera location

- ☐ None present
- ☐ Bumper
- ☐ License plate
- ☐ Tailgate/Hatch/Trunk
- ☐ Other (specify): _____

7. Video image quality under scene lighting conditions

- ☐ None present
- ☐ Good
- ☐ Average
- ☐ Poor (specify): _____
- ☐ Unknown

8. Was the camera functioning properly

- ☐ None present
- ☐ Yes
- ☐ No, poor image quality due to glare
- ☐ No, poor image quality due to atmospheric conditions
- ☐ No, camera turned off
- ☐ No, camera inoperable
- ☐ Unknown

ULTRASONIC/RADAR SENSOR

Specify object detection range on diagram

9. System make/model

_____

10. Auditory warning illumination

- ☐ No sensor present
- ☐ Yes
- ☐ No
- ☐ Unknown

11. Number of sensors ____

12. Sensor locations
(Select all that apply)

- ☐ No sensor present
- ☐ Left bumper
- ☐ Center bumper
- ☐ Right bumper
- ☐ License plate area
- ☐ Tailgate/Hatch/Trunk

13. Was warning system functioning properly

- ☐ No sensor present
- ☐ Yes, system alerted driver
- ☐ No, system did not alert driver
- ☐ No, system turned off
- ☐ No, system inoperable
- ☐ Unknown

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14. Did driver react to warning

- ☐ No sensor present
- ☐ Yes
- ☐ No
- ☐ Unknown
- ☐ Sensor present, did not sound

15. Did driver report common false warnings

- ☐ No sensor present
- ☐ Yes
- ☐ No
- ☐ Unknown

Not Applicable

No Driver Present ☐

Undo Not Applicable

Reset Values

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National Highway Traffic Safety Administration

DRIVER FORM

Special Crash Investigations
Non-Traffic Surveillance

1. Case Number

C R 1 6 0 3 6

DRIVER PROFILE

2. Driver's Age ____ ____
   99 = Unknown

3. Driver's Sex
   - ☐ Male
   - ☐ Female
   - ☐ Unknown

4. Driver's Height ____ ____ ____ cm
   999 = Unknown

5. Driver's Weight ____ ____ ____ kg
   999 = Unknown

6. Driver eyewear worn
   (Select all that apply)
   - ☐ None
   - ☐ Eyeglasses
   - ☐ Sunglasses
   - ☐ Contacts
   - ☐ Unknown

7. Driver vision deficiency condition
   (Select all that apply)
   - ☐ None
   - ☐ Near sighted
   - ☐ Far sighted
   - ☐ Astigmatism
   - ☐ Other (specify): _____
   - ☐ Unknown

8. Non motorist's relationship to driver
   - ☐ No relationship
   - ☐ Child
   - ☐ Grandchild
   - ☐ Sibling
   - ☐ Neighbor
   - ☐ Friend
   - ☐ Other (specify): _____
   - ☐ Unknown

DRIVER ACTIONS

9. Driver approach to vehicle for entry
   - ☐ From left front
   - ☐ From left
   - ☐ From left rear
   - ☐ From right rear
   - ☐ From right front
   - ☐ Circled vehicle
   - ☐ Return trip (backing into driveway/lot)
   - ☐ Other (specify): _____
   - ☐ N/A
   - ☐ Unknown

10. Driver entry interruption
    (Select all that apply)
    - ☐ Direct trip from building to vehicle
    - ☐ Loaded items into vehicle
    - ☐ Spoke with family
    - ☐ Spoke with neighbors
    - ☐ Spoke with contacted nonmotorist
    - ☐ Return trip (backing into driveway/lot)
    - ☐ Other (specify): _____
    - ☐ N/A
    - ☐ Unknown

11. Purpose of backing
    - ☐ Leaving parking space in parking lot
    - ☐ Backing onto roadway from driveway
    - ☐ Entering parking space in parking lot
    - ☐ Backing into driveway from roadway
    - ☐ Other (specify): _____
    - ☐ N/A
    - ☐ Unknown

12. Where was driver going
    Description:

    _____

    _____

13. Driver in a hurry
    - ☐ Yes
    - ☐ No
    - ☐ N/A
    - ☐ Unknown

14. How did driver check behind (rear area of vehicle) after vehicle entry
    (Select all that apply)
    - ☐ Did not look
    - ☐ Checked mirrors
    - ☐ Turned right and looked back
    - ☐ Turned left and looked back
    - ☐ Viewed Camera
    - ☐ Listened for auditory/visual warning from system
    - ☐ Other (specify): _____
    - ☐ N/A
    - ☐ Unknown

15. Estimated time between vehicle entry and start of backing
    - ☐ 0-10 Seconds
    - ☐ 11-30 Seconds
    - ☐ 31-60 Seconds
    - ☐ Over 60 Seconds
    - ☐ N/A
    - ☐ Unknown

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16. What direction was the driver looking during backing maneuver
(Select all that apply)

- ☐ Straight ahead
- ☐ Right
- ☐ Left
- ☐ Rearward
- ☐ At object inside the car
- ☐ At mirrors
- ☐ Other (specify): _____
- ☐ N/A
- ☐ Unknown

17. Was the driver distracted during back up maneuver
(Select all that apply)

- ☐ No non-driving activities

External

- ☐ Looking at other vehicles
- ☐ Looking at other non motorist
- ☐ Looking at intended turn destination
- ☐ External focus, not specified
- ☐ Other external focus (specify): _____

Internal

- ☐ Looking at other occupant
- ☐ Talking to passenger
- ☐ Dialing phone
- ☐ Talking on phone
- ☐ Listening to radio/cd/portable playback device
- ☐ Adjusting radio/cd player
- ☐ Adjusting climate controls
- ☐ Using a device/controls integral to vehicle (specify): _____
- ☐ Reading/adjusting navigation system
- ☐ Eating or drinking
- ☐ Smoking related
- ☐ Retrieving fallen object (specify): _____
- ☐ Internal focus, not specified
- ☐ Focused on other internal object (specify): _____
- ☐ N/A
- ☐ Unknown

18. Driver avoidance actions prior to impact
(Select all that apply)

- ☐ None
- ☐ Braking
- ☐ Steering left
- ☐ Steering right
- ☐ Accelerating
- ☐ Other (specify): _____
- ☐ N/A
- ☐ Unknown

19. Did driver see struck non motorist prior to impact
(Select all that apply)

- ☐ No, never saw non motorist
- ☐ Saw non motorist prior to entering vehicle
- ☐ Saw non motorist after entering vehicle
- ☐ Other (specify): _____
- ☐ N/A ☐ Unknown

20. Est time between start of backing and impact

- ☐ <2 or = 1 second
- ☐ 2-5 seconds
- ☐ 6-10 seconds
- ☐ > 10 seconds
- ☐ N/A ☐ Unknown

21. Driver interior sightline obstructions
(Select all that apply)

- ☐ Pillar
- ☐ Headrest
- ☐ Cargo
- ☐ Other occupant
- ☐ Other (specify) _____
- ☐ Unknown
- ☐ None

22. Recent experience driving this vehicle

- ☐ More than 10 times the last three months
- ☐ 6-10 times the last three months
- ☐ 2-5 times the last three months
- ☐ Less than 2 times the last three months
- ☐ First time driving this vehicle
- ☐ N/A
- ☐ Unknown

23. Frequency of driving in this parking lot/driveway

- ☐ Daily
- ☐ Weekly
- ☐ Several times a month
- ☐ Monthly
- ☐ Rarely
- ☐ First time in lot/driveway
- ☐ N/A ☐ Unknown

24. Driver Impairment
(Select all that apply)

- ☐ No drugs or alcohol present
- ☐ Alcohol present (specify BAC): _____
- ☐ Drugs present (specify):_____
- ☐ Unknown

25. Source of alcohol/drug results

- ☐ Police reported
- ☐ Medical record
- ☐ Other (specify)_____
- ☐ Not Tested
- ☐ Unknown if tested

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Not Applicable ☐

U.S. Department of Transportation
National Highway Traffic Safety Administration

Non Motorist Form

Reset Values

Special Crash Investigations
Non-Traffic Surveillance

1. Case Number
C R 1 6 0 3 6

NON-MOTORIST PROFILE

2. Non-motorist's Age
99 = Unknown
0 3 ☐ Months ☉ Years

3. Non-motorist's Sex
☉ Male
☐ Female
☐ Unknown

4. Non-motorist's Height
999 = Unknown
0 9 9 cm

5. Non-motorist's Weight
999 = Unknown
0 2 4 kg

6. Medical outcome
☐ Not injured
☐ ER only
☐ Hospitalized 1-4 days
☐ Hospitalized 5 days or more
☐ Treatment later
☉ Fatal
☐ Unknown

7. Source of most severe injury
☐ Bumper
☐ Tire
☐ Undercarriage
☉ Other Specify: Hyperthermia
☐ Ground
☐ N/A
☐ Unknown

8. Non-motorist impairment
(Select all that apply)
☉ No drugs or alcohol present
☐ Positive for alcohol (specify BAC): _____
☐ Positive for drugs (specify): _____
☐ Unknown

9. Source of alcohol/drug results
☐ Police reported
☐ Medical Report
☐ Other (specify) _____
☉ Not Tested
☐ Unknown if tested

NON-MOTORIST ACTIONS

10. Non-motorist attitude
☐ Standing
☐ Bending at waist
☐ Sitting
☐ Crouching
☐ Kneeling
☐ On skates/skateboard
☐ On bike/scooter
☉ Other (specify) N/A
☐ Unknown

11. Non-motorist motion
☐ Not moving
☐ Walking slowly
☐ Walking rapidly
☐ Running or jogging
☐ Skipping/Hopping/Jumping
☐ Falling/Stumbling/Rising
☐ On skates/skateboard
☐ On bike/scooter
☉ Other (specify): N/A
☐ Unknown

12. Non-motorist approach relative to rear of vehicle
☐ Stationary
☐ From left
☐ From right
☐ From behind
☉ Other (specify): N/A
☐ Unknown

13. Non-motorist first avoidance action
☐ No avoidance actions
☐ Stopped
☐ Accelerated pace
☐ Ran away (along vehicle path)
☐ Jumped
☐ Turned away from vehicle
☐ Turned toward vehicle and braced
☐ Dove or fell away from vehicle
☉ Other (specify): N/A
☐ Unknown

14. Non-motorist primary focus of attention
☐ Striking vehicle
☐ Play object
☐ Person
☐ Surrounding traffic
☐ Animal
☐ Handheld electronic (phone, MP3 player, etc.)
☉ Other Object (specify) N/A
☐ Unknown

15. Were any other Non-motorists present?
(Select all that apply)
☉ Alone
☐ One adult present
☐ One other child present
☐ Multiple adults present
☐ Multiple children present
☐ Unknown

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NON MOTORIST CLOTHING

NOTES:

- Specify Color, Fabric and Texture/Weight for outermost layer only
- Indicate "*NONE*" if applicable
- Available codes:

Colors		***Fabrics***	***Textures***	***Weights***
Black	Charcoal gray	Natural	Soft	Heavy
Lt gray/silver	Brown	Synthetic	Slick	Medium
Gold/tan	Purple	Blend	Coarse	Light
Dark blue	Light blue			
Dark green	Light green			
Maroon	Red			
Orange	Yellow			
White	Other (specify)			
Pink				

	Clothing	Color	Fabric	Texture	Weight
HEADWEAR	Hat				
	Helmet				
	Hood				
	Other (specify): _____				
	Unknown				
UPPER BODY	Short Sleeve				
	Long Sleeve				
	Light Jacket				
	Heavy Jacket				
	Other (Specify): _____				
	Unknown	Unknown	Unknown	Unknown	Unknown
LOWER BODY	Shorts				
	Pants				
	Shoes				
	Other (specify): _____				
	Unknown	Unknown	Unknown	Unknown	Unknown

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**National Highway
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